

REMARKS/ARGUMENT

Claims 2, 3, 5-9, 11-16, 18-20, and 24-29 are pending in the application. Applicants have amended Claims 6, 10, 11, 13, 17, 24, and 25 in response to the Examiner's comments in the Office Action to which this Amendment is responsive. Applicants respectfully submit that the claims, as amended, are allowable over each of the references cited and applied by the Examiner, whether taken alone or in combination with each other. Applicants respectfully request reconsideration of Claims 2, 3, 5-9, 11-16, 18-20, and 24-29 for the reasons set forth below.

The Examiner has objected to several of the amendments to the specification under 35 U.S.C. §112. The Examiner states that the amendments are not supported by the original disclosure, and thus, are new matter. A number of these amendments to the specification were to add the word "about" before specific measurements such as "sixty degrees," "eighty degrees," "3 inches," "6 inches," "10 inches," etc. There is nothing in Applicants' specification that would lead anyone to believe that these measurements were intended to be exact measurements. In fact, Applicants' whole specification discloses an insulating wire separator apparatus for laying pipe and tracer wires in an excavation ditch on a construction site. Persons skilled in the art in view of Applicants' disclosure would know that these measurements are not precise measurements such as those to be measured by a micrometer or other precise measuring instrument. Each of Applicants' measurements must be interpreted in view of the specification and in light of that which is disclosed. The valuation of the specification by a person skilled in the art to which Applicants' invention pertains would clearly believe that the words "about sixty degrees" would be included within the words "sixty degrees" and the same can be said for each

of Applicants' other measurements. Further, the words "sixty degrees" in view of Applicants' specification would inherently include the words "about sixty degrees."

The Examiner has also objected to the specification inasmuch as the phrase "a pair of conduit engaging sliding wedge surfaces" in the claims is not adequately supported or disclosed in the original specification. Reconsideration is respectfully requested. The specification clearly discloses a conduit receiving portion 120 which

"is preferably sized to resiliently receive the main conduit 180 through an opening D provided in the main conduit receiving portion 120. The opening D extends about the outer circumference of the main conduit receiving portion 120, and preferably extends from sixty to eighty degrees from the center line of the main conduit receiving portion 120, to allow the main conduit 180 to be flexibly received through said opening D." Lines 5-11, page 7.

Thus, it is clear that the main conduit receiving portion 120 is constructed to receive a main conduit through the opening D and is resiliently flexible to expand the opening D to the size of the diameter of the conduit and then to resiliently close about the main conduit to hold the main conduit within the main conduit receiving portion 120.

The specification further states:

"the insulating wire separator 100 is applied to conduits 180, cables or piping by pressing or deforming the main conduit [against] receiving portion 120 so that it opens sufficiently to receive at least one conduit 180, cable or piping therein, and then resiliently closes to grip the conduit 180, cable or piping to which it is applied." Lines 4-7, page 8.

Thus, not only the resiliency of the main conduit receiving portion 120 is disclosed, but also, the fact that the main conduit 180 is positioned within the main conduit receiving portion 120

through the opening D and “by pressing or deforming the main conduit receiving portion 120 so that it opens sufficiently to receive at least one conduit 180, cable or piping therein.” That pressing or deforming must occur by the engagement of the distal ends which define the opening D of the main conduit receiving portion 120 with the conduit 180 in a manner such that the main conduit 180 acts as a wedge sliding upon those conduit engaging sliding wedge surfaces to resiliently expand the opening D to allow the main conduit 180 to be positioned within main conduit receiving portion 120.

Arguably, even if the conduits 180, cables or piping are positioned by inserting the conduit coaxially into the conduit receiving portion 120, the conduit receiving portion 120 would still have “a pair of conduit engaging sliding wedging surfaces on opposite sides of said opening.” However, the contents of the specification would indicate that the conduits 180, cables or piping would already be existing in an excavated trench when the insulating wire separator apparatus 100 is applied to the conduits 180, cables or piping. Thus, it seems inherently disclosed that the positioning of the conduits 180, cables or piping within the main conduit receiving portion 120 is achieved by placing the conduits 180, cables and/or piping partially within the opening D and deforming the same by pressing the opening D of the main conduit receiving portion 120 against the conduits 180, cables or piping and deforming the main conduit receiving portion 120 so that it opens sufficiently to receive the conduits 180, cable or piping therein and then resiliently closes to grip the conduits 180, cables or piping to which it is applied exactly as described in the specification on page 8.

Thus, the conduits 180, cables or piping act as a wedge against the distal ends of the conduit receiving portion 120 defining the opening D to resiliently expand the opening D to allow the conduits 180, cables and/or piping within the conduit receiving portion 120. These distal ends of the conduit receiving portion 120 have “conduit engaging sliding wedge surfaces on opposite sides of said opening” as claimed in the claims. Reconsideration is respectfully requested.

The Examiner has also objected to the drawings because they include a “Q” in Fig. 7A and do not include reference numerals 180, 120, and 122, lines 2-2 on page 4, line 22, and line 3-3 on page 5, line 3. The specification and the drawings have been amended herein to place the drawings in compliance with 37 CFR §1.84(p)(5). Two copies of the drawings having a proposed amendment to the drawings in red ink are attached hereto.

The Examiner has objected to Claim 24 as including the phrase “from said main conduit” twice, and Claim 25 having the word “a” instead of the word “an.” Both claims have been amended as suggested by the Examiner.

Reconsideration of Claims 2, 3, 5, 9, 11, 16, 18-20, and 24-29, rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains or which it is most nearly connected to make and/or use the invention, is respectfully requested.

Regarding Claims 7 and 28, the limitation “from about sixty to about eighty degrees” is disclosed “from sixty to eighty degrees” at page 9, line 11; regarding Claim 11, the limitation “at least about two inches” is disclosed as “at least two inches” on page 8, line 21; regarding Claim

8, the limitation “from about three to about thirty degrees” is disclosed as “from three to thirty degrees” on page 9, line 3. The context of these dimensions, i.e., a wire separator 100 utilized to be positioned on a main conduit 180 in an excavation ditch on a construction site, no person skilled in the art would believe that these dimensions are exact dimensions. Inherently, they are imprecise dimensions and are not the kind of dimensions that one would normally expect to be measured by a micrometer or other precise instrument. In this context, the addition of the word “about” is proper.

Regarding the limitation “a foot plate and earth anchor portion” in line 15 of Claim 24 and elsewhere, the specification discloses “a foot plate and earth anchor portion of insulating wire separator 100” as “A plate or anvil portion 140 * * * positioned at right angles to the arm or extension portion 130 in proximity to the conduit receiving portion 120” at page 7, lines 14-15 in the context of discussing the resiliency of the conduit receiving portion 120 and the deformation thereof between the distal ends to receive at least one conduit 180 cable or piping therein. What is clearly expressed in the specification is that the insulating wire separator apparatus’ major purpose is to maintain a spacing between the conduits 180, cables or piping and the tracer wire 170. It is also clear from the specification and the drawings that if the insulating wire separator 100 were allowed to rotate about the conduits 180, cables or piping, the connector tracer wire 170 could engage the conduits 180, cables or piping, thus thwarting the entire purpose of the insulating wire separator 100. Thus, from both the disclosure of the specification and the drawings, it is clearly evident that the function of the plate or anvil portion 140 is (1) to help maintain the position of the wire separator 100 after being buried by backfilling the trench

in which the conduits 180, cables or piping are located, and (2) to assist in applying sufficient pressure between the conduits 180, cables or piping and the distal ends 122 of opening “D” of the main conduit receiving portion 120 to resiliently expand the opening “D” and to receive the main conduit 180 within the main conduit receiving portion 120. Applicants, in amending the claims to include “a foot plate and earth anchor portion” are merely inserting into the claim adjectives to the disclosed “plate or anvil portion” to give the reader of the claim a better idea as to the function of what is being claimed. Applicants respectfully submit that the language “a foot plate and earth anchor portion” enhances the claim and particularly points out and distinctly claims the subject matter which Applicants regard as the invention as required by 35 U.S.C. §112 and does not render the claim in any way indefinite or ambiguous. Reconsideration is respectfully requested.

The Examiner has also objected to Claims 6 and 13 as the limitation “said other end of said arm portion” has insufficient antecedent basis in the claims. Both of these claims have been amended to provide a proper antecedent basis for the limitation intended. Applicants respectfully request reconsideration.

Reconsideration of Claims 2, 6, 24, 26 and 27, rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,601,260 issued to Shinohara et al is respectfully requested. Reconsideration of Claims 3, 5, 7, 8, 11, 19, 20, 28, and 29, rejected under 35 U.S.C. §103(a) as being obvious in view of the patent issued to Shinohara et al is also respectfully requested. Reconsideration of Claims 9 and 18, rejected under 35 U.S.C. §103(a) as being unpatentable over the patent issued to Shinohara et al in view of U.S. Patent No. 5,772,166 issued to Adams,

is respectfully requested. Reconsideration of Claims 12-15 and 25, rejected under 35 U.S.C. §103(a) as being unpatentable over Shinohara et al in view of U.S. Patent No. 5,018,260 issued to Ziu, is respectfully requested. Reconsideration of Claim 16, rejected under 35 U.S.C. §103(a) as being unpatentable over Shinohara et al in view Ziu and further in view of U.S. Patent No. 5,772,166 issued to Adams, is also respectfully requested.

The patent issued to Shinohara et al discloses a flexible retainer having at one end an anchor retaining portion 30 for mounting the retainer on a mounting plate by placing the anchor portion 30 in a mounting hole formed in the mounting plate. The flexible retainer has a pair of leg pieces 26 which are provided at an anchor portion 30 to which the distal ends of the pair of legs are connected, pawl pieces 34 which are inserted through the mounting hole so as to elastically abut a back surface of the mounting plate, elastic plates 40 which are provided in pairs to oppose the pawl pieces 34 and to elastically contact the surface of the mounting plate. Because the elastic plates 40 urge the anchor portion in a direction of withdrawing the anchor portion, the engaging structure of the retainer can conform to changes in the thickness of the mounting plate. Moreover, against a force pulling the anchor portion 30 out of the mounting hole due to the inclination of the retainer, the pawl pieces 34 are pressed and expanded so as to widely abut the back surface of the mounting plate. Accordingly, the withdrawal of the anchor portion is prevented. See Figs. 3-6.

The retainer is proposed by Shinohara et al to support a degaussing coil. Fig. 7 is a schematic showing the flexible retainer of the invention in use to support the degaussing coil. Thus, the entire purpose of the flexible retainer of Shinohara et al is to position the degaussing

coils of a cathode ray tube on a mounting plate, and has nothing to do with positioning a tracer wire from a conduit 180, pipe or cable.

Spaced from the retainer (the leg pieces 26 and pawl pieces 34 and the elastic plates 40 of the Shinohara et al retainer), are a pair of arc-shaped clamp plates 41 which together with the triangular pressing plate 52 and guide piece 50 define a retaining space 44 for the degaussing coils and a V-shaped guide portion which guides the degaussing coils into the retaining space 44. Two spaced apart clamp plates 41 are disclosed in a position which is spaced from the legs 26 and pawl pieces 34 of the retaining portion. At the end of the flexible retainer opposite the anchor portion 30 and the leg pieces 26 and the pawl pieces 34 of the anchor portion is a thin plate-like portion 14 having a plurality of non-slip transverse grooves formed therein which are substantially parallel to each other. The transverse grooved portion 14 can be gripped by the fingers and inserted through a gap between a housing 16 and the cathode ray tube 18. See Fig. 7. Shinohara et al does not teach any conduit receiving portion 120 at one end of the flexible retainer, nor any tracer wire clip portion 150 at the opposite end of the retainer, nor is there any disclosure of any device to connect a tracer wire 170 to conduits 180, cables or piping, or for any such device to be used in excavation ditches in a construction area or any device to keep uniform placement of tracer wires throughout utility systems, or any device to maintain a tracer wire 170 from the conduits 180, cables or piping and to prevent movement during the backfilling process or freeze and thaw movements of the earth, or a separator post 160, or a foot plate and earth anchor portion. Applicants respectfully submit that the Examiner is misconstruing the Shinohara et al reference and misapplying that reference to Applicants' claims.

The Examiner interprets the Shinohara et al retainer to have a conduit receiving portion 41 adjacent end 14 not at an end. Applicants' conduit receiving portion is "at one of said opposite ends," not adjacent to any end of Applicants' elongated body. The Examiner interprets Shinohara et al to have an I-beam arm portion extending between ends 20 and 14 and extending away from the main conduit receiving portion on the side opposite the opening extending to the opposite end of the elongated body a distance beyond the main conduit receiving portion. Such language is not used in the same manner as Applicants' language as is clear from Applicants' specification. Applicants' conduit receiving portion is at the end of Applicants' body and Applicants' arm portion extends away from the conduit receiving portion toward the opposite end. Shinohara et al's clamp plate 41, which the Examiner is stating is analogous to Applicants' conduit receiving portion, is spaced midway between opposite ends 14 and 20.

Similarly, Shinohara et al's retainer has no anchor portion. The Examiner points to stay plate 46 on frame 12. However, stay plate 46 is not a plate or anchor portion such as disclosed by Applicants. Stay plate 46 combines with stay plate 41 to provide additional rigidity to the frame 12. See Col. 5, lines 60-65. Stay plate 46 is no different than the flanges of Applicants' I-beam portion.

The Examiner also interprets Applicants' tracer wire clip portion to also be equivalent to the clamp plate 41 of the Shinohara et al retainer. Thus, the Examiner is equating Applicants' wire clip portion and Applicants' conduit receiving portion, whereas Applicants have disclosed these portions to be totally different in structure and function. Finally, the Examiner is utilizing the Shinohara et al leg pieces 26 and pawl pieces 34 to be Applicants' separator post when, in

fact, they are at one of the ends of the Shinohara et al retainer, and thus, are not positioned as Applicants' separator post and generally are totally distinguished from the Shinohara et al anchor portion 30 and elastic plates 40 in both structure and function.

The patent issued to Shinohara et al does not teach or suggest an insulating wire separator apparatus for separating a tracer wire a safe distance from a main conduit in a trench prior to backfilling. The patent issued to Shinohara et al does not teach or suggest Applicants' wire separator apparatus having an elongated body having opposite ends, a resilient main conduit receiving portion at one of said opposite ends having an inner radius sized to receive said main conduit therein, an opening into said main conduit receiving portion sized to flex about said main conduit. Even the Examiner admits that Shinohara et al's clamp plates 41 are not at an end of Shinohara et al's flexible retainer. Further, it is clear from the drawings that the coil placed in the clamp plates 41 so as to not require the entire clamp plate to resiliently expand to receive the coil wires.

Lastly, Shinohara et al's clamp plates 41 do not have a pair of conduit engaging sliding wedge surfaces on opposite sides of said opening which engage said main conduit to flex said main conduit receiving portion to expand said opening and position said main conduit within said main conduit receiving portion upon the application of force between said main conduit and said conduit engaging sliding wedging surfaces of said main conduit receiving portion. The Shinohara et al clamp plate 41 has only one sliding wedge surface which functions as claimed by Applicants. The other wedge surface is fixed in position.

The Shinohara et al device also has no plate and anchor portion extending generally perpendicular from said arm portion in proximity to said conduit receiving portion * * * to expand said opening to position to said main conduit in said main conduit receiving portion and to resist rotation of said wire separator apparatus about said main conduit after backfilling.

The Shinohara et al reference does not teach or suggest Applicants' separator post positioned between said other end of said opposite ends and said foot plate and anchor portion, nor does the Shinohara et al patent disclose or suggest a tracer wire clip portion midway between said separator post and the center line of said main conduit portion. Stay plate 46 of the Shinohara et al retainer is not such a device, nor is it Applicants' foot plate and earth anchor portion.

Regarding Claim 3, Shinohara et al does not expressly teach the separator post spaced at least ten inches from the plate portion, nor would it have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arm portion and to modify the structure of Shinohara et al to extend the specified distance claimed by Claim 3 since in the Shinohara et al device, there is no purpose for such structure. Elastic plates 40, as above mentioned, are not Applicants' separator post. Applicants' separator post is spaced from Applicants' main conduit receiving portion and said tracer wire clip portion. Further, how would it have been obvious to extend whatever structure of Shinohara et al one believes is analogous to Applicants' separator post at least ten inches from the plate portion unless it is designed to serve a function calling for such a separation for which there is no disclosure in Shinohara et al.

With regard to Claims 5 and 20, again, the color coding would not have been obvious to Shinohara et al unless there was some purpose for color coding. Each of the wires of the coil positioned in Shinohara et al's clamp plates are turns of the same coil, and thus, no purpose is disclosed for any color coding whatsoever. Since the coil is totally functional and does not provide aesthetic relief for the device, there is no teaching or even the faintest suggestion of any benefit for color coding in the Shinohara et al device.

Regarding Claims 7, 8, 19 and 29, there is no teaching in the Shinohara et al device of any opening being angled from about 60 to about 80 degrees or any wire clip finger portion being angled from about three to 30 degrees from the center line of the arm portion. Clearly, it would not have been obvious to anyone skilled in the art at the time the invention was made to have modified the opening of the clamp plates 41 in the Shinohara et al device to these angles as the clamp plates are designed for receiving turns of a coil wire substantially smaller than the clamp plate itself and thus Shinohara et al does not teach or suggest anything even remotely similar to placing Applicants' conduit within Applicants' main conduit receiving portion. Thus, there is nothing in the Shinohara et al reference that would teach angles of such dimensions as claimed by Applicants.

With regard to Claims 9 and 18, Shinohara et al does not teach Applicants' main conduit receiving portion comprising first and second half radiused portions. The patent issued to Adams does not add to the teaching of Shinohara et al. Adams discloses a mounting clip for a light. There is no description whatsoever in Adams as to what kind of a light is being held by the light holder, and thus, there is no teaching whatsoever as to whether or not the light holder of

Adams makes any suggestion or teaching of Applicants' main conduit receiving portion or Applicants' tracer wire clip or the conduit to be received therein. There is no teaching or suggestion in either reference that would allow combining these references. These references can only be combined in hindsight of Applicants' disclosure. Such hindsight construction is not permitted.

With regard to Claims 12-15 and 25, the patent issued to Ziu does not significantly add to the teaching of the patent issued to Shinohara et al. Ziu discloses a support for an inner thermoplastic pipe coaxially within an outer thermoplastic pipe which has a strengthening rib thereon. There is no teaching or suggestion in either reference that would allow combining these references. These references can only be combined in hindsight of Applicants' disclosure. Such hindsight construction is not permitted.

With regard to Claim 16, neither the patent issued to Ziu or Adams adds to the patent issued to Shinohara et al. Shinohara et al does not teach a main conduit receiving portion having first and second half radiused portions. Adams discloses a mounting clip above described. Shinohara et al does not teach the main conduit receiving portion of Applicants. The patent issued to Ziu is only used to add an outer rib to Applicants' conduit receiving portion which Applicants believe is "a stretch" and Adams is only used to releasably fasten the two half radiused portions together by a releasable fastener. There is absolutely no commonality or suggestion in which to combine the Shinohara et al, Ziu, and Adams references. The Shinohara et al reference teaches wires of a coil substantially smaller than the clamp plate 41 into which they are received. There is no suggestion in the Shinohara et al reference that any rib is

necessary for that application inasmuch as the resilient expanses of the clamp plates 41, if any, is not substantial, and the Adams reference does not teach or suggest the combination of the clip plates nor the releasable fastener. There is no teaching or suggestion in either reference that would allow combining these references. These references can only be combined in hindsight of Applicants' disclosure. Such hindsight construction is not permitted.

Claims 2, 3, 5-9, 18, and 25-29 are dependent upon Claim 24. Thus, Claims 2, 3, 5-9, 18, and 25-29 each include all of the language of Claim 24, and thus, are submitted to be allowable for the same reasons as reiterated above with regard to Claim 24. Claim 2 further requires:

“the insulating wire separator apparatus is made of a resilient, nonconductive, noncorrosive, nonbiodegradable material.”

Claim 3 further requires:

“a separator post extends at right angles from said arm portion, said separator post spaced at least ten inches from said plate portion; and said arm portion extends at least two inches beyond said separator post, to provide safe spacing for additional underground utilities in a common trench location.”

Claim 5 further requires:

“said body is color coded, with a separate color used for each utility.”

Claim 6 further requires:

“the tracer wire clip portion is located at said other of said opposite ends.”

Claim 7 further requires:

“the opening in the resilient, main conduit receiving portion is from about sixty to about eighty degrees from the centerline of the main conduit.”

Claim 8 further requires:

“the tracer wire clip finger portion is angled from about three to about thirty degrees from the centerline of said arm portion to engage varying sizes of tracer wire therein.”

Claim 9 further requires:

“the main conduit receiving portion comprises an inner radius having a first half portion, with a second half portion releasably secured to said first half portion by a releasable fastener.”

Claim 18 further requires:

“the main conduit receiving portion comprises a first half radiused portion, with a second half radiused portion releasably secured to said first half radiused portion by a releasable fastener.”

Claim 25 further requires:

“said main conduit receiving portion has an outwardly extending strengthening rib which extends between said conduit engaging sliding wedge surfaces and said arm portion.”

Claim 26 further requires:

“said tracer wire clip portion has a pair of fingers for receiving a tracer wire therebetween.”

Claim 27 further requires:

“a separator post extending generally perpendicularly from said arm portion in proximity to said tracer wire clip portion.”

Claim 28 further requires:

“the opening provided in the resilient, main conduit receiving portion is from about sixty to about eighty degrees from the centerline of the main conduit.”

Claim 29 further requires:

“the tracer wire clip portion is angled from about three to about thirty degrees from the centerline of said arm portion to engage varying sizes of tracer wire.”

Claim 11 is dependent upon Claim 27 and thus includes all of the language of Claims 27 and 24. Claim 11 is submitted to be allowable for the same reasons as reiterated above with regard to Claims 24 and 27. Claim 11 further requires:

“said arm portion extends at about least two inches beyond said separator post to provide safe spacing for additional underground utilities in a common trench location.”

Claims 12-16 are each dependent upon Claim 25. Thus, Claims 12-16 each include all of the language of Claims 24 and 25 and are submitted to be allowable for the same reasons as reiterated above with regard to Claims 24 and 25. Claim 12 further requires:

“said body is color-coded with a separate color used for each utility.”

Claim 13 further requires:

“the tracer wire clip portion is located at said other of said opposite ends.”

Claim 14 further requires:

“the opening provided in the resilient, main conduit receiving portion is from about sixty to about eighty degrees from the centerline of the main conduit.”

Claim 15 further requires:

“the tracer wire clip finger portion is angled from about three to about thirty degrees from the centerline of said arm portion to engage varying sizes of tracer wire therein.”

Claim 16 further requires:

“the main conduit receiving portion comprises an inner radius having a first half radiused portion, with a second half radiused portion releasably secured to said first half radiused portion by a releasable fastener.”

Claims 19 and 20 are each dependent upon Claim 26. Thus, Claims 19 and 20 each include all of the language of Claims 24 and 26 and are submitted to be allowable for the same reasons as reiterated above with regard to Claims 24 and 26. Claim 19 further requires:

“the tracer wire clip finger portion is angled from about three to about thirty degrees from the centerline of said arm portion to engage varying sizes of tracer wire therein.”

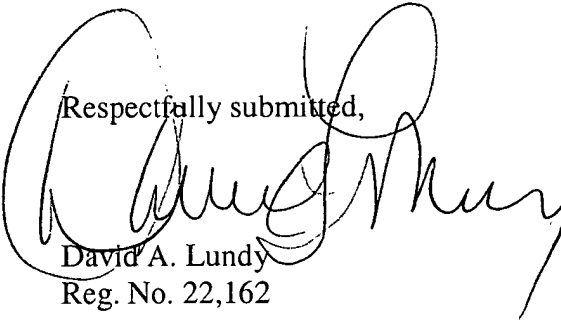
Claim 20 further requires:

“said body is color-coded, with a separate color used for each utility.”

Applicants respectfully submit that if the Examiner reads the Shinohara et al reference and interprets its language fairly as between that reference and Applicants' disclosure, each of Applicants' claims as amended patentably distinguishes Applicants' invention from each of the references cited or applied by the Examiner, whether taken alone or in combination with each other.

Applicants respectfully solicit the prompt issuance of a Notice of Allowance for all of the reasons given above and in Applicants' response dated March 17, 2003 and filed on March 20, 2003, the argument of which is incorporated herein as if repeated verbatim.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David A. Lundy". The signature is fluid and cursive, with a large initial "D" and "A".

David A. Lundy
Reg. No. 22,162

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